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AUTHOR McIntosh, John L.
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ABSTRACT

General data on suicide among the elderly are available but the trends and levels often have been either ignored or misrepresented. Available data indicate that despite declines, suicide rates in the United States remain highest in old age. Impediments to understanding elderly suicide occur due to omissions in available national data bases. Inadequacies of available, official, national and other data include the omission of: marital status and time in that status; race/ethnicity; socioeconomic status; occupation (e.g., retired); living conditions (e.g., with whom); mental, physical, and chronic conditions; and historical information (e.g., past attempts). This and other information about elderly suicides would be useful to test etiological theories and determine high risk subgroups for intervention. The unavailability of various population data also produces problems, e.g., annual population data necessary for rate calculations are only available in aggregate from above age 85. Data essential for a more precise comprehension are either not available or are difficult and/or expensive to secure. The quantity and quality of currently available data allow little more than a general impression of elderly suicide. Better, more detailed information is recommended to improve the understanding and prevention of suicide in old age. (Author/BL)

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# Elderly Suicide Data Bases: Levels, Availability, Omissions

by

John L. McIntosh, Ph.D.
Indiana University at South Bend

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Address correspondence to:
John L. McIntosh, Ph.D.
Department of Psychology
Indiana University at South Bend
P.O. Box 7111
South Bend, IN 46634
Phone: (219) 237-4343

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# Elderly Suicide Data Bases: Levels, Availability, Omissions

John L. McIntosh, Ph.D.*

Indiana University at South Bend

Department of Psychology

## Abstract

General data on suicide among the elderly are available but the trends and levels have often been either ignored or misrepresented. Data presented indicate that despite declines, U.S. suicide rates remain highest in old age. Further impediments to understanding elderly suicide occur due to omissions in available national data bases. Available official national and other data, their strengths, weaknesses, and inadequacies are presented, including the omission of: marital status and time in that status, race/ethnicity, SES, occupation (e.g., retired), living conditions (e.g., with whom), mental, physical, and chronic conditions, and historical information (e.g., past attempts). These and other information about elderly suicides would be useful to test etiological theories and determine high risk subgroups for intervention. The unavailability of various population data also produces problems (e.g., annual population data necessary for rate calculations are only available in aggregate form above age 85). Data essential for a more precise comprehension are either not available or are difficult and/or expensive to secure. The quantity and quality of currently available data allow little more than a general impression of elderly suicide and better, more detailed information is recommended to improve our understanding and prevention of suicide in old age.

*Address: Assistant Professor of Psychology, IUSB, P. O. Box 7111, South Bend, IN 46634.

Elderly Suicide Data Bases: Levels, Availability, Omissions

Before we can deal directly with the suicide data for the elderly, we must consider the source of such available figures--official statistics. Official statistics on causes of death, including for suicide, are kept by the U.S. and most developed countries in the world. Official data are derived from death certificates and the cause listed thereon (see Brooke & Atkinson, 1974, for a description of procedures for ascertaining that a death was suicide). It is important to note that official mortality data are collected for medico-legal purposes and not research purposes. The accuracy, quality, and usefulness of these official figures have been criticized by many writers (among them, Atkinson, 1978, Chapter 3; Douglas, 1967, Chapter 12; Lester, 1972, Chapter 12; Simpson, 1950). These authors argue that official statistics contain systematic biases (e.g., counted more accurately for some groups than for others) which make their use questionable.

There is evidence that the classification of deaths as suicide is affected by several factors, including: the backgrounds and orientations of those who determine the cause of death (coroners, medical examiners, etc.; see Lester, 1983, Chapter 6, for a recent review); by societal taboos regarding suicide and negative sanctions (particularly toward the surviving family members); and particular circumstances of the death itself (e.g., method employed, presence or absence of a note). These and other factors lead to a lessened likelihood of a suicide classification unless it is obvious (see also Shneidman, 1963; Monk, 1975, pp. 193-195; Gibbs, 1968, pp. 13-14). Such classification problems undoubtedly lead to underreporting of the actual incidence of suicide in a culture. There are other problems as well. Comparability of figures across time can be affected by the revisions that occur about every ten years in the international classification of diseases and death. Available data on comparability of these classification scheme revisions (see, e.g., National Center for Health Statistics, 1982) suggest that this is a minor problem but one that should be noted.

Other data problems important for the present topic pertain to population estimates. Since suicide rates are based on both suicide incidence and population figures (see Formula 1), inaccuracies in either component will affect the resultant computed rates. I noted above possible factors that affect (and generally lower) the suicide figures, but population figures are also suspect in some instances. Population estimates are based on census data which are most inaccurate among the young, the very old, and nonwhites (e.g., Native Americans: Passel, 1976). A greater problem is that population estimates that are needed to compute rates are often not available (Starsinic, personal communication) for some age groups (e.g., breakdowns of the 85 and above population) or for specific racial groups.

$$\text{Formula 1: Suicide rate} = \frac{\text{No. of suicides in the population}}{\text{No. of individuals in the population}} \times 100{,}000$$

Although the difficulties inherent in the use of official statistics seem formidable, some researchers have presented evidence

which suggests that the bias so often maintained is not as large as has been claimed. For example, studies by Sainsbury and associates (Sainsbury, 1973; Sainsbury & Barraclough, 1968; Sainsbury & Jenkins, 1982) have led to the conclusion that although suicide rates based on official statistics are most likely underestimates, little systematic bias occurs. So long as the limitations are kept in mind and the consistencies in the data are focused upon, the data should be a valuable part of the information regarding the health of the groups studied (Hopper & Guttmacher, 1979; Kleinman, 1982). Official mortality statistics are the only consistently available nationwide source of data (Glasser, 1981). As such, they are the best (though possibly low) estimates we have of the incidence of suicide in our culture and its subgroups. Despite all their shortcomings, we can be fairly confident that the official figures on suicide are the most conservative estimates of the numbers which actually occur (Hatton, Valente, & Rink, 1977). Reid (1960, p. 17) stated that for suicide the "death certificates form a fairly reliable guide to the frequency of such events in any defined population."

On the assumption that available suicide data are not perfect but are at least a useful index to the levels which occur among a population, let us consider what is available regarding the characteristics, levels and trends of elderly suicide data before we focus on what is not available. I will present the general findings of much of the available data for which population estimates exist (with which to calculate rates). The annually available characteristics coded in the data are: age (5- and 10-year age groups generally), sex, race (white, all nonwhites, black, nonwhites excluding blacks, Native Americans [American Indians], Chinese, Japanese, Filipino, and "all other," in recent years), geographic information (state, Standard Metropolitan Statistical Areas [SMSAs], etc.), whether an autopsy was performed, date of death, and the suicide method employed (see e.g., McIntosh & Santos, in press, for suicide methods by age). These data characteristics do not generally provide sufficient information to test theories about the etiology of elderly suicide and the contribution of these factors to the suicidal acts of the aged. They provide us essentially with a general idea regarding the extent and trends of elderly suicide but alone are an insufficient base with which to understand aged suicide. For example, important age-related trends in suicide rates have occurred in our country. I am certain Dr. Seiden will discuss the point in greater detail, but the two trends are 1) suicide rates have increased for the young and 2) decreased for the elderly (see Figure 1 & the bottom of Figure 2). The available suicide data are insufficient to tell us why elderly rates have declined. It has not been the increasing number of suicide prevention centers in the U.S. The old rarely utilize them (McIntosh, Hubbard, & Santos, 1981). Combined with other kinds of data and using correlational methods we have begun to find hints that the economic changes for the old are a factor (Marshall, 1978) and that the increasing proportion of women (a low suicide risk population) in old age (McIntosh, Hubbard, & Santos, 1980) but not the general increase in the elderly population as a whole (Holinger & Offer, 1982) may be important factors. We are still as unsure as was Busse (1974) when he stated

How much of the decrease might be the result of the use of

anti-depressant drugs is not known, or of increased therapeutic efforts on the part of suicide prevention centers and community mental health programs; or the increased economic security and health care resulting from the implementation of Social Security and Medicare legislation. All are possible factors. (p. 221)

We remain far from an adequate explanation for this important trend.

Traditional characterizations of suicide rates by age have stated that rates increase with age, peaking in old age. While this remains generally true, the two trends already noted have altered the curve to a more bimodal one (see Figure 3). Despite increases for the young and decreases for the old, however, it is important to note that suicide peaks in old age today just as it always has in the United States. The old have been and continue to be the highest risk group for suicide.

Insert Figures 1-3 about here.

Altnough the oft-cited statement that the aged comprise 10% of the population but commit 25% of the suicides (e.g., Bock, 1972; Butler, 1975; Resnik & Cantor, 1970) exaggerates the case (the 65+ population has never committed a full 25% of the suicides; see the top of Figure 2), the essential relationship remains accurate. That is, suicide is overrepresented among the elderly. For example, those 65 years of age and above made up 11.3% of the 1980 population, but they committed 16.9% of the suicides (4537/26869, NCHS, 1983; U.S. Bureau of the Census, 1982).

The old age peak in suicide rates is especially so for males and whites (see Figures 4 & 5). As can be seen, suicide rates are most divergent for the sexes and races in old age because rates for the respective groups (males vs. females, whites vs. nonwhites) are moving in opposite directions in old age. That is, rates for women peak in middle age and decline in old age whereas those for men continue to rise throughout the elderly years. Similarly, rates for nonwhites as a whole peak in young adulthood and decline to low levels in old age whereas rates for whites rise with age and peak in old age. The highest risk individuals for suicide from a demographic/epidemiological standpoint, therefore, are elderly white males (there are also specific racial differences by age, see McIntosh, 1980, and McIntosh & Santos, 1981).

Insert Figures 4 & 5 about here.

Before turning completely to elderly suicide data limitations and needs, one of these issues centers on the data that I have thus far presented. Much of the elderly suicide data I have discussed has been based upon "old" being defined as 65 and above. There is good evidence that this aggregrate grouping disguises important differences. A recent compilation of official data (McIntosh, 1983) has shown that suicide rates among both the young-old (55-74 or 65-74) and old-old (75+) subpopulations have declined over time, but that the decline has

been somewhat greater among the young-old and has occurred especially for young-old males (see Figure 6). Considering the elderly as a single homogenous group does not seem warranted in suicide any more than in many other behaviors and circumstances (see e.g., Neugarten, 1974).

Insert Figure 6 about here.

As measured by suicide rates, old age is the time of highest risk. The data on which these rates are computed, however, have several limitations which lessen their potential usefulness for aiding in the understanding of elderly suicide (for a further general discussion of these limitations, see Boldt, 1981). In addition to the underreporting problem, official national suicide data are also incomplete, i.e., important information about the individuals who committed suicide are not available. In some cases the information was available on state and local levels, (i.e., the actual death certificates) but it was not retained or coded for national data due usually to the lack of funds or interest (Greenberg, personal communication). Examples of possibly important data from the standpoint of understanding suicidal behavior include socioeconomic status and income, occupation and employment situation (or "retired" and time since retirement), living conditions and circumstances (including with whom one lives), the existence of physical or mental illness, alcoholism and/or drug abuse and/or chronic conditions, as well as historical information (such as past experiences, past suicide attempts, hospitalizations, recent loss, religion and religiosity, etc.). One factor which usually is available on the death certificates is the individual's marital status. The suicide literature contains many statements that the widowed and divorced are high risk for suicide (e.g., Frederick, 1978). The last national data available in the U.S., however, was for the time period 1959-61 (see Kramer, Pollack, Redick, & Locke, 1972) [Marital status was returned to the information available on the detailed mortality tapes in 1979 for the nation.]. Even here though, other important information is lacking, e.g., the time in that status (widowed, married, divorced, separated, number of marriages, circumstances surrounding the status, etc.).

An additional data problem is the unavailability of figures that are potentially available on the coded data but are untabulated. One such example is the lack of data by age for specific U.S. racial/ethnic minorities (see e.g., McIntosh & Santos, 1981). These data are only available to those who are able to obtain costly annual computer tapes which contain death records and who then extract the information on age and ethnicity. The available coded racial groups also include omissions, most noticeably any data for Hispanics (Hispanic data are coded by some states [McIntosh & Santos, unpublished data], but generally they are included in aggregrate form with the rest of the white population and are not separable.). Even if many of these data were available, however, population figures with which to calculate rates are available for few of them. A particularly pertinent example here is that suicide figures are available in 5- and 10-year age groups to 100+, but population estimates are available only for the aggregate

85+ population as a whole. These extremely old groups have been suggested to be at lower risk for suicide than their immediately "younger" groups (e.g., Bromley, 1974, p. 146), but population data necessary to test such statements are not available.

One of the most glaring final problems with suicide data (even greater than in many ways than the desired in-depth and historical information) is that it must be collected from secondary sources, from the family, friends, and others. Our greatest source of verification, and of valid and reliable data, the suicide victim, is not available to provide that information.

In sum, the official mortality data provide information on the characteristics of elderly suicides as a group but provide little in the understanding and prediction of the specific elderly individual who commits suicide. These characteristics are not necessarily related to the reasons for the elderly person's suicide. For example, a person may have been a widow at the time of their death but that characteristic may be a minor or unimportant one in their suicide. It has been suggested that elderly suicides are most commonly multiply caused, with the suicide more a response to an entire life situation than to any single aspect or event (Barter, 1969). To be sure, there is a need for in-depth individual data collection that may be more sensitive to the multiplicity of circumstances and their historical place in producing a suicidal act.

To improve suicide data for the elderly and provide figures that are useful in hypothesis and theory testing as well as for prevention, systematic, consistent, accurate, detailed, and historical information is needed on the elderly suicide population. Such a detailed and retrievable data base would certainly be costly and time-consuming to collect, maintain, and update. The problems are great but these data are needed if the complex questions generated by theory are to be adequately tested and our knowledge, understanding, and prevention efforts are to improve among this high risk population.

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Figure 1
Suicide among the Young, 1933-1978

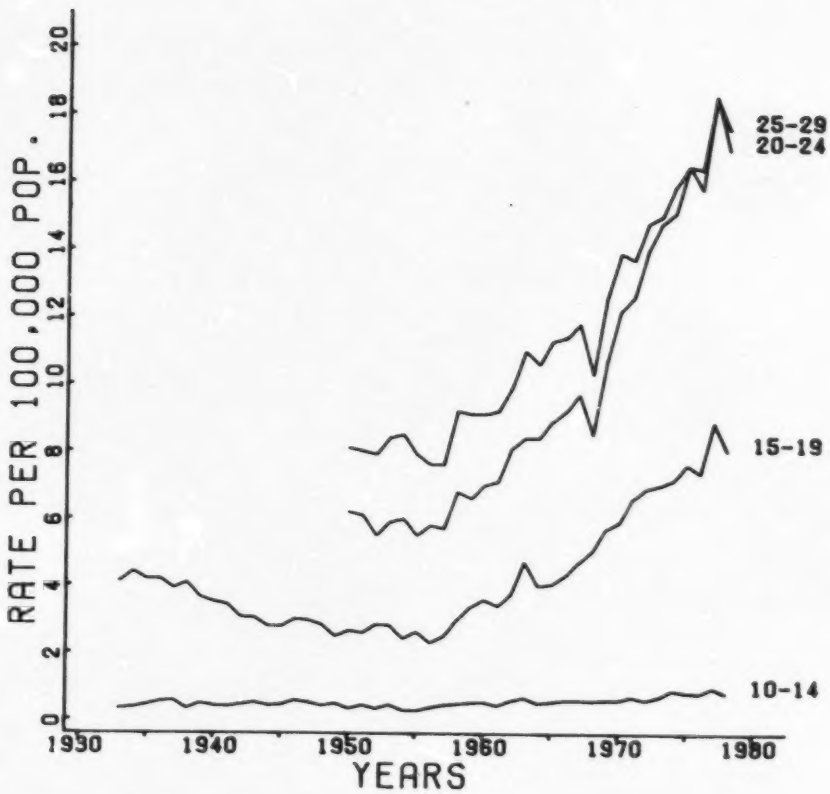

Figure 2
Elderly Suicide/Population Contribution:
Percentages and Rates, 1900-1979

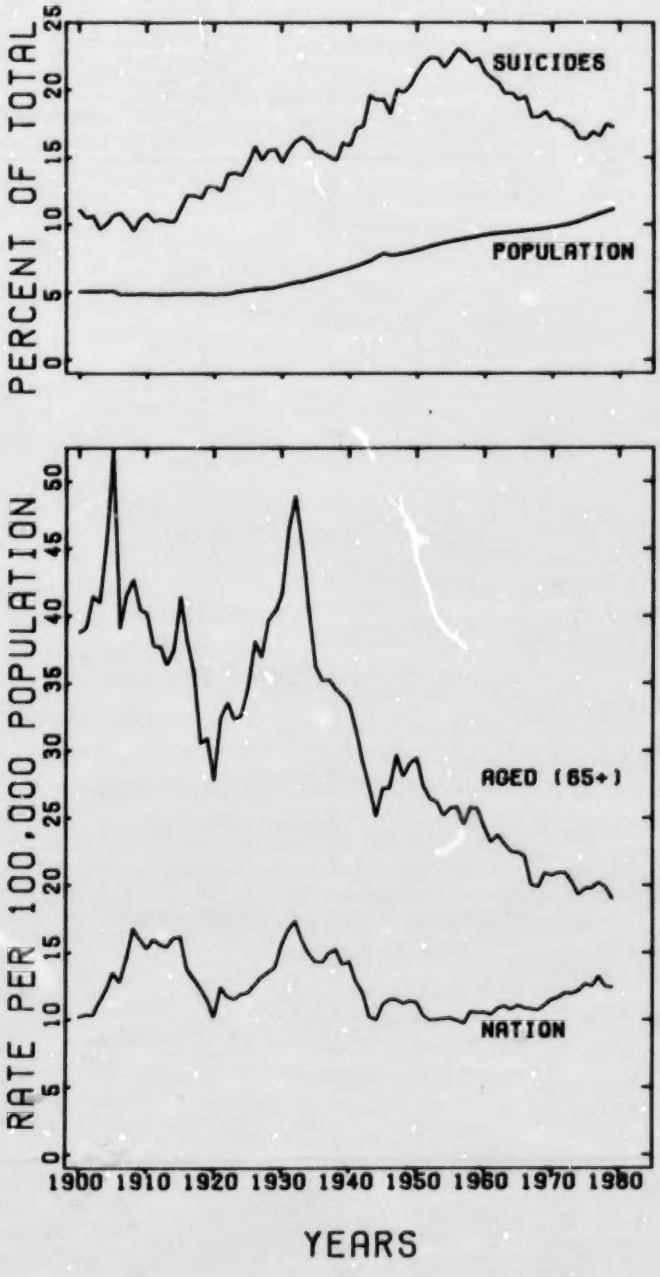

Figure 3
United States Suicide by Age, 1969, 1974, 1979

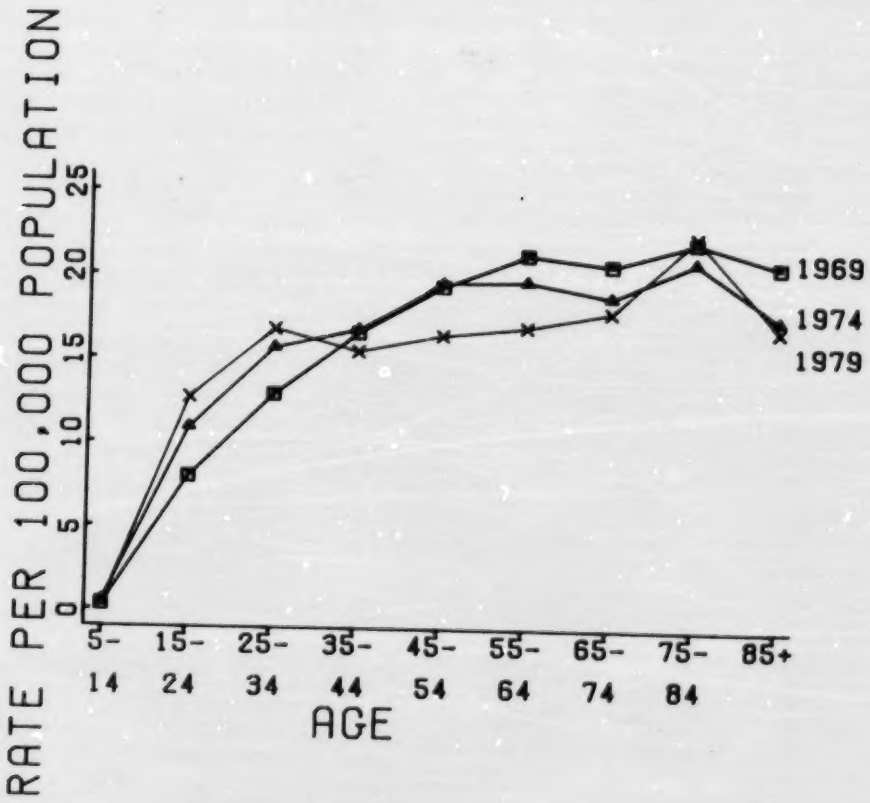

Figure 4
United States Suicide by Age and Sex, 1978

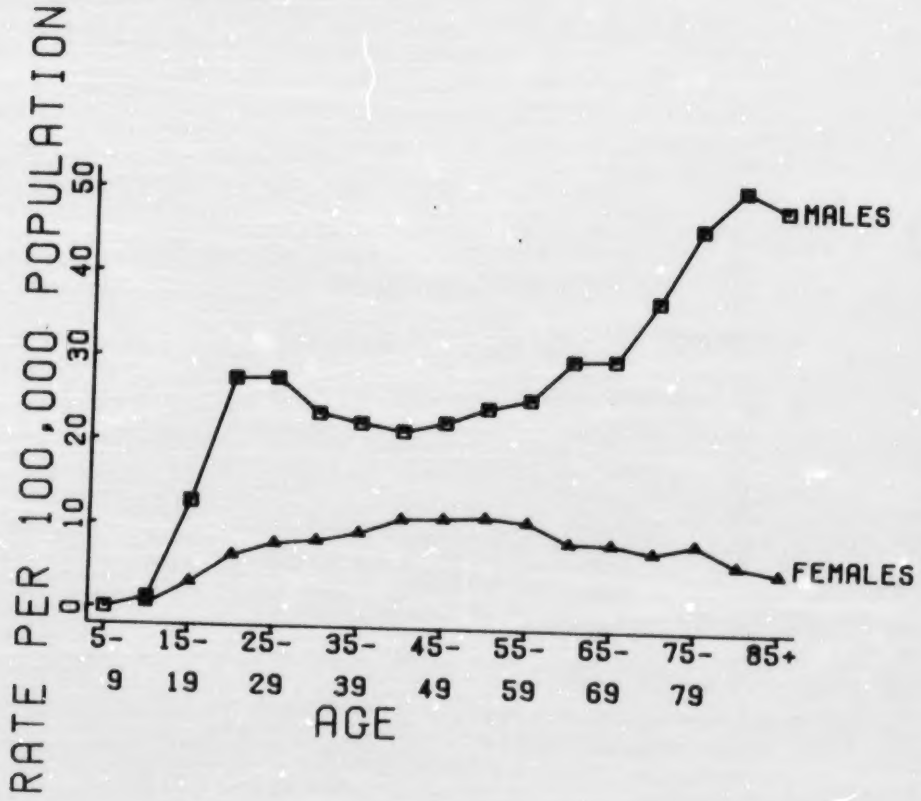

Figure 5
United States Suicide by Age and Race, 1978

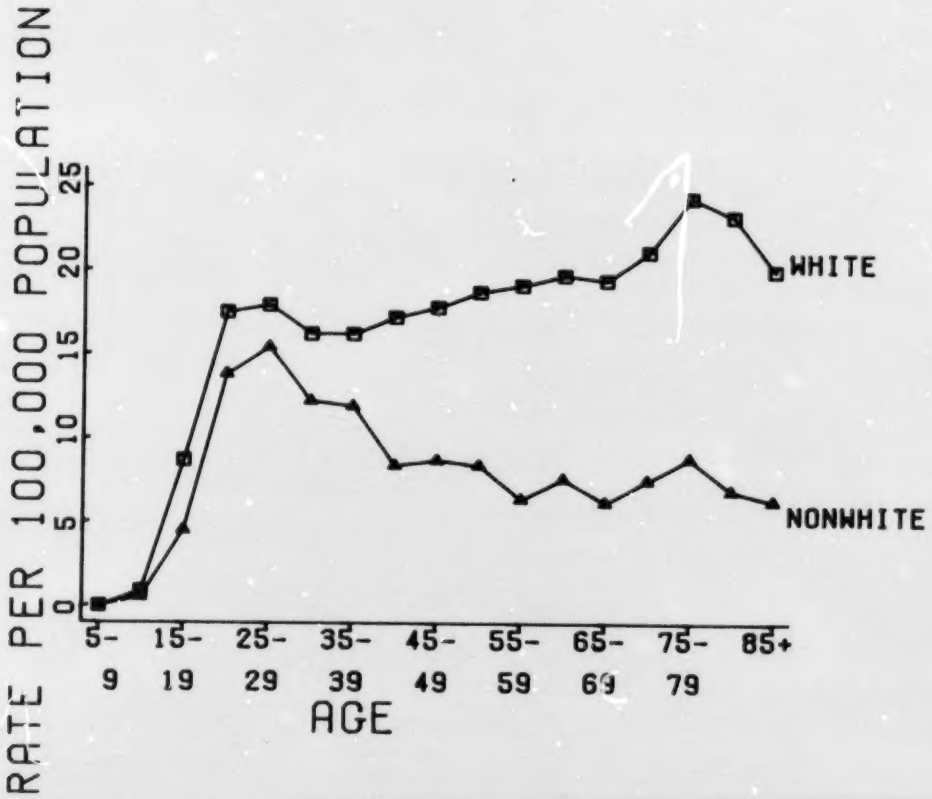

Figure 6
Old-Old (75+) & Young-Old (55-74 & 65-74) Suicide by Sex, 1933-79